

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Nobuyuki YASUDA, ET AL.
Serial No. : To be assigned (Divisional Application of 10/147,105)
Filed : Herewith (January 27, 2004)
For : PHARMACEUTICAL USE OF N-CARBAMOYLAZOLE
DERIVATIVES
Group Art Unit : Parent case was assigned to 1626
Examiner : Parent case was assigned to Kamal Saeed

Commissioner of Patents
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Alexandria, VA 22313-1450

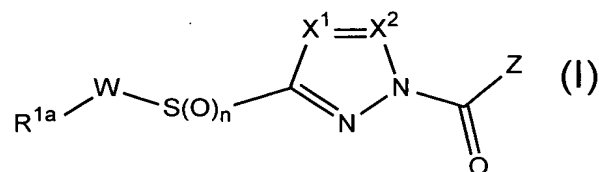
Mail Stop: Patent Application

PRELIMINARY AMENDMENT

Sir:

Please cancel claims 7-9 and substitute therefore:

7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (New) A method of treating or preventing diabetic diseases by using a dipeptidyl peptidase IV inhibiting agent represented by the general formula (I):

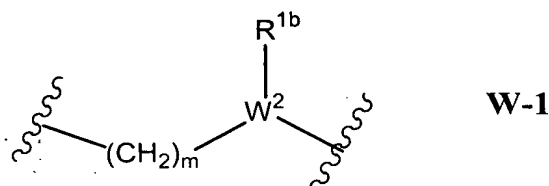


wherein R^{1a} represents a C_{1-6} alkyl group, a C_{3-8} cycloalkyl group, a 5- to 10-membered aromatic heterocyclic group, a C_{6-10} aromatic hydrocarbon-cyclic group, a 4- to 10-membered heterocyclic group, or a C_{4-13}

polycycloalkyl group;

n means an integer of 0 to 2;

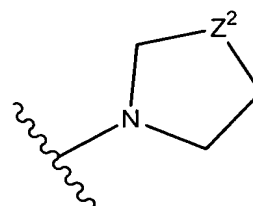
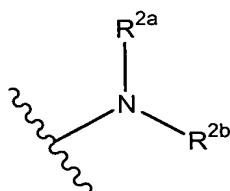
W represents a single bond, a C₁₋₆ alkylene group, or a group represented by following formula W-1:



wherein W² represents a nitrogen atom or methine group, m means an integer of 0 to 3, and R^{1b} represents a C₁₋₆ alkyl group, a C₃₋₈ cycloalkyl group, a 5- to 10-membered aromatic heterocyclic group, a C₆₋₁₀ aromatic hydrocarbon-cyclic group, a 4- to 10-membered heterocyclic group, or a C₄₋₁₃ polycycloalkyl group;

each of X¹ and X² independently represents a nitrogen atom or a methine group;

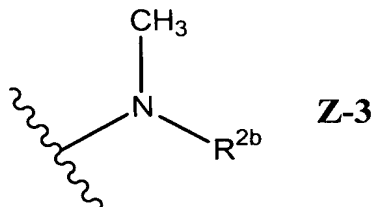
Z represents a group represented by following formula Z-1 or Z-2:



wherein each of R^{2a} and R^{2b} independently represents a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, or a phenyl group, and Z² represents a sulfur atom or a methylene group; and

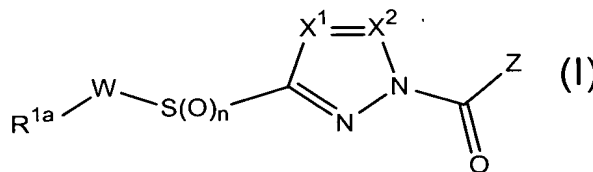
wherein R^{1a} and R^{1b} may be substituted with one to three substituents selected from the group consisting of (1) halogen atoms, (2) a hydroxyl group, (3) C₂₋₆ alkenyl groups, (4) C₂₋₆ alkynyl groups, (5) a phenyl group, (6) a cyano group, (7) C₁₋₆ alkoxy groups which may be substituted with one to three halogen atoms or C₁₋₆ alkoxy groups, and (8) C₁₋₆ alkyl groups which may be substituted with one to three halogen atoms or C₁₋₆ alkoxy groups.

11. (New) The method according to claim 10, wherein Z is a group represented by the following formula Z-3:



wherein R^{2b} represents a C_{1-6} alkyl group, a C_{2-6} alkenyl group, or a phenyl group.

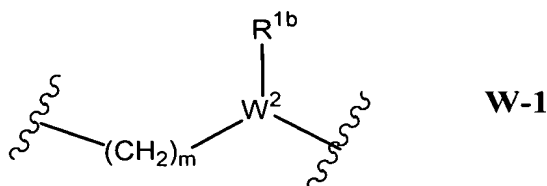
12. (New) The method according to claim 10, wherein R^{1a} is a phenyl group or a 4-pyrazolyl group.
13. (New) The method according to claim 10, wherein X^1 is a nitrogen atom, and X^2 is a methine group.
14. (New) The method according to claim 10, wherein X^1 and X^2 are methine groups.
15. (New) The method according to claim 10, wherein n is 1 or 2.
16. (New) A method of treating or preventing obesity by using a dipeptidyl peptidase IV inhibiting agent represented by the general formula (I):



wherein R^{1a} represents a C_{1-6} alkyl group, a C_{3-8} cycloalkyl group, a 5- to 10-membered aromatic heterocyclic group, a C_{6-10} aromatic hydrocarbon-cyclic group, a 4- to 10-membered heterocyclic group, or a C_{4-13} polycycloalkyl group;

n means an integer of 0 to 2;

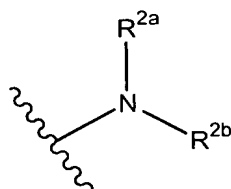
W represents a single bond, a C_{1-6} alkylene group, or a group represented by following formula W-1:



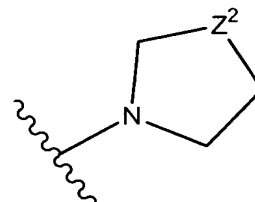
wherein W^2 represents a nitrogen atom or methine group, m means an integer of 0 to 3, and R^{1b} represents a C_{1-6} alkyl group, a C_{3-8} cycloalkyl group, a 5- to 10-membered aromatic heterocyclic group, a C_{6-10} aromatic hydrocarbon-cyclic group, a 4- to 10-membered heterocyclic group, or a C_{4-13} polycycloalkyl group;

each of X^1 and X^2 independently represents a nitrogen atom or a methine group;

Z represents a group represented by following formula Z-1 or Z-2:



Z-1



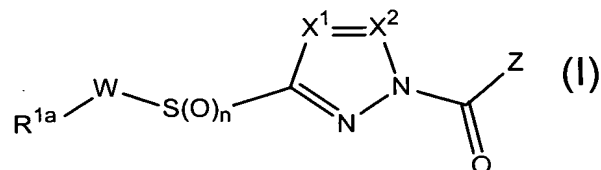
Z-2

wherein each of R^{2a} and R^{2b} independently represents a C_{1-6} alkyl group, a C_{2-6} alkenyl group, or a phenyl group, and Z^2 represents a sulfur atom or a methylene group; and

wherein R^{1a} and R^{1b} may be substituted with one to three substituents selected from the group consisting of (1) halogen atoms, (2) a hydroxyl group, (3) C_{2-6} alkenyl groups, (4) C_{2-6} alkynyl groups, (5) a phenyl group, (6) a cyano group, (7) C_{1-6} alkoxy groups which may be substituted with one to three halogen atoms or C_{1-6} alkoxy groups, and (8) C_{1-6} alkyl groups which may be substituted with one to three halogen atoms or C_{1-6} alkoxy groups.

17. (New) A method of treating or preventing hyperlipemia, AIDS, osteoporosis, intestinal disorders, neovascularization, infertility, inflammation, allergy, immunomodulatory disorders, hormone-modulatory disorders, rheumatism or cancers by using a dipeptidyl peptidase IV

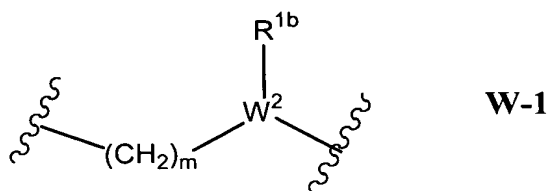
inhibiting agent represented by the general formula (I):



wherein R^{1a} represents a C₁₋₆ alkyl group, a C₃₋₈ cycloalkyl group, a 5- to 10-membered aromatic heterocyclic group, a C₆₋₁₀ aromatic hydrocarbon-cyclic group, a 4- to 10-membered heterocyclic group, or a C₄₋₁₃ polycycloalkyl group;

n means an integer of 0 to 2;

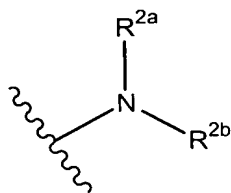
W represents a single bond, a C₁₋₆ alkylene group, or a group represented by following formula W-1:



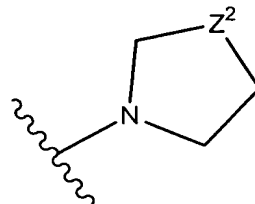
wherein W² represents a nitrogen atom or methine group, m means an integer of 0 to 3, and R^{1b} represents a C₁₋₆ alkyl group, a C₃₋₈ cycloalkyl group, a 5- to 10-membered aromatic heterocyclic group, a C₆₋₁₀ aromatic hydrocarbon-cyclic group, a 4- to 10-membered heterocyclic group, or a C₄₋₁₃ polycycloalkyl group;

each of X¹ and X² independently represents a nitrogen atom or a methine group;

Z represents a group represented by following formula Z-1 or Z-2:



Z-1



Z-2

wherein each of R^{2a} and R^{2b} independently represents a C₁₋₆ alkyl group, a C₂₋₆ alkenyl group, or a phenyl group, and Z² represents a sulfur atom or a